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Customised colours for catwalk PCs

Dell has launched a range of notebook PCs in a variety of colourful shades, attempting to attract customers who demand style as well as technical features. The company, which exhibited the new designs at fashion show-style events around the world, claims that it is transforming into a more design-led organisation.

The new computer line-up includes four desktop PCs, but it's the eight notebook colour options that are the most noticeable change from Dell's traditional grey and black design. And if you don't want a 'ruby red', 'espresso brown', 'sunshine yellow' or MacBook-style 'alpine white' model, you can opt for a slightly more conservative 'midnight blue' or 'jet black' one. Extrovert US customers can also choose 'flamingo pink', whereas UK buyers are being offered an identical 'bubblegum pink' colour.

The company has also continued in its recent decision to provide AMD-based systems alongside those containing Intel processors. Until last year Dell supplied only Intel-based systems, although Intel has always denied that this was because of an exclusive deal between the two companies. Two out of the five new notebook models will contain AMD processors.

Dell is trying hard to shrug off its grey, corporate image and connect with hip, young media-savvy customers. It is touting the new Inspiron notebooks

as lifestyle devices, which means that they include a number of wireless options to allow users to remain permanently connected to the internet. By default the systems come with 802.11g WiFi, but a faster Draft-N adaptor can be installed as an option. Mobile broadband is provided in the UK by Vodafone.

Each notebook's screen is a widescreen model, which Dell claims is "the window into your digital memories". There are options for high-gloss TrueLife or non-glare finishes. An integrated 2.0-megapixel webcam makes sending still and moving images over the internet a cable-less affair. A blog posting on Dell's site claimed that this last feature was included as a result of customer requests on Dell's IdeaStorm.com website.

While Dell's new products might catch the eye of the fashion-conscious, it still lacks the cool or exciting attitudes that companies such as Apple manage to radiate. "We've packed these new Inspiron and XPS systems with features [such as] mobile broadband, widescreen displays and colour choices to help customers experience the high-definition lifestyle they seek," said the company in a statement that its press office attributed to both Alex Gruzen, senior vice-president for Dell Consumer Products, and Hervé Mattan, marketing director, Home and Small Business, Dell EMEA.



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Dell removes trialware from new business PCs

Dell has launched a new set of products for small businesses of between one to 25 employees. The Vostro range of desktop and notebook PCs include a year's free support and 10GB backup and a complete lack of trial software. Dell claims that the Intel-based systems are able to manage themselves and "excel in multitasking". It also supplies AMD-based Vostro PCs.

The Vostro website at www.smartbusinessit.co.uk highlights details of finance deals, but if you just want to shop for PCs go to the Small Business section of the Dell website at www.dell.co.uk. This includes details of the new notebook PCs, which range from £229 for the AMD-based Vostro 1000 up to £549 for an Intel Core 2 Duo Vostro 1700 with three years' support.



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Virus risk for holiday-makers

Sun, sea and pirated software increase the risk of viruses and spyware

The careless attitude of Brits on holiday puts them at an increased risk of infection from computer viruses. Large numbers of holiday-makers set aside their fears and morals when searching for bargains in the sun, according to research by Microsoft.

The research found that although most consumers consider counterfeit goods to be theft, over a third have knowingly bought them while abroad. The overwhelming reason is that if it's cheap, it's fair game.

However, what appear to be fantastic bargains often include some undocumented 'extras' designed to infect PCs and hand control to online criminals. Black-market copies of Windows frequently come complete with spyware included so, while customers think they are saving a few pounds, they could also be storing up a lot of trouble for later.

Michala Alexander, Microsoft's head of anti-piracy, told *Shopper*: "The chance of buying something at a cut price is attractive, but people are getting more than they bargained for."

"People who buy pirated software are putting themselves at risk of cyber-crime and identity theft... Using non-genuine software also means that internet fraudsters can access your personal details more as pirated goods are typically far less secure," she added.

Microsoft found that software was the fourth most popular counterfeit item bought by those surveyed, after DVDs, music and fashion items. The majority of those who bought pirated goods agreed with the statement: "If I can get them more cheaply, why wouldn't I?"

However, while buying counterfeit software is undoubtedly riskier than purchasing legitimate goods, Microsoft's claims that discs are often packed with spyware conflicts with the findings of some security companies.

"Pirated goods are typically far less secure"

We asked Symantec, the world's leading anti-virus company, if it had encountered malware being distributed through counterfeit software sold on physical discs. Con Mallon, regional product marketing director at Symantec, told *Shopper* that this threat has not appeared on the

radar but that it was always advisable to buy only legitimate software. Kaspersky Lab had a similar view, although senior technology consultant David Emm told us that a colleague had once found some malware on software CDs bought in Romania.

Computer Shopper asked Microsoft to clarify its findings. It told us that its latest research was actually conducted by IDC. We found that this research did not test physical discs but concentrated on software downloads. It did, however, refer to some Microsoft analysis that was carried out in June 2006. This found that 43 per cent of counterfeit Windows XP discs tested contained "additional programs, or binary code, that are not part of genuine Microsoft Windows. The tampered code... could result in trouble such as denial-of-service attacks, bypassed password protections and application memory corruption."



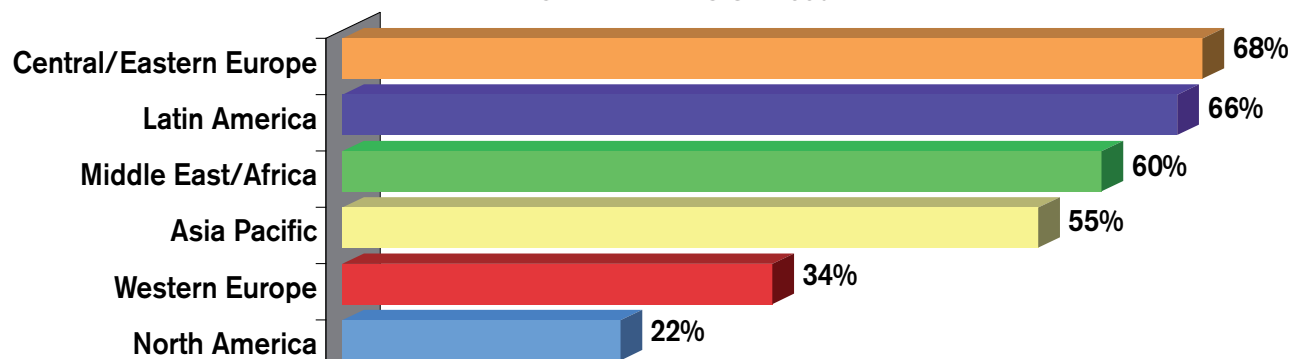
▲ High-quality counterfeit goods such as this Windows XP pack are hard to detect

Global counterfeit software hotspots

The Business Software Alliance (BSA) claims that over a quarter of all software used in the UK is illegal, estimating that software companies are losing nearly £900m annually. This figure assumes that all users of pirated software would have bought legitimate copies if the illegal versions weren't available. If accurate, this amount would make the UK figure the

fifth largest total in the world. The BSA has found that most pirated software is found in Central and Eastern Europe and Latin America. In both regions, nearly 70 per cent of all software installed on PCs is pirated. The Middle East, Africa and Pacific Asia follow closely behind, with over 50 per cent of all PCs containing illegal software.

PIRACY RATE BY REGION 2006



SOURCE: BUSINESS SOFTWARE ALLIANCE (WWW.BSA.ORG)

AllofMP3 down and out

Russian online music download site AllofMP3.com has been shut down after political pressure from the USA. Although it claimed to run a legal service, the popular site had been accused of selling pirated music. It was estimated to be the second most popular music download site in the UK after iTunes. It also charged one tenth of the price that iTunes charges for music tracks and provided files that were free of copy protection.

AllofMP3.com has repeatedly pointed out that it pays royalties to an organisation called ROMS, which is supposed to distribute payments to artists. However, music companies in the US and UK do not recognise ROMS as representing their interests.

The low prices that AllofMP3.com charged, and the fact that it allowed users to upload music tracks to add to its catalogue, meant that its legality for users outside Russia was highly

suspect, even if it was legal within Russian borders. According to a report in the Times Online, the Russian Interior Ministry had investigated the company for two years and Russia's Minister of Trade and Economic Development later agreed to shut it down.

The site experienced problems even before its demise, when users started to encounter problems paying for the service. Visa, MasterCard and PayPal all refused to handle payments to MediaServices, the company behind the site.

Since the site's closure, a company called Regiontorg has launched a music download service called Mp3Sparks.com. The site's design and catalogue are remarkably similar to those of AllofMP3.com, and it even recognises the login details of some customers. Currently it claims to accept only credit card payments, although this facility was not available as we went to press.



▲ The MP3Sparks.com website looks remarkably similar to the now defunct AllofMP3.com

Back up or lose your memories

PC users are playing roulette with their precious files, risking the loss of irreplaceable photos as well as valuable music collections. While we are relying more and more on our computers to store images from digital cameras, home movie files and music recordings, most of us are failing to prepare for a disaster, according to BT.

The company recently asked 800 people if they took any precautions against the theft of their PC or a major hardware or software failure. Sixty per cent admitted that they had no backup plan. In many cases users don't even have insurance to cover the loss of valuable files. *Computing Which?* magazine recently surveyed 46 insurance companies to find out which included cover for the loss of digital content. It discovered that less than half currently recognise the importance and value of computer files.

While insurance companies are making a move in the right direction, with some already providing cover for downloaded music such as files from the iTunes service, things become more complicated when personal files are involved. BT's Ciaran Astin told *Shopper* that "one-third of the people we spoke to who take no backup precautions have already lost photos. These can't be replaced like music tracks from iTunes."

Currently there is no sensible alternative to backing up files, but this is an onerous task that most people ignore until it is too late. "People don't want to think about the more boring side of using a PC, taking precautions and doing backups," said Astin. "And those who have done a backup may have done it a long time ago."

BT's solution is an online backup service called BT Digital Vault www.digitalvault.bt.com. A free Basic version provides 1GB of space, while a Plus service allows for 20GB of files and includes an automatic backup utility. This costs £4.99 per month.

Ultimate gaming chip

Intel has launched two new quad-core processors. The Intel Core 2 Extreme is aimed at enthusiasts who need maximum performance. It essentially contains two dual-core Core 2 Duo processors in one package, which runs at 3GHz. A standard Core 2 Quad model is also available, but the Extreme version will be of most interest to hobbyists who want to overclock their systems. Intel has removed the multiplier lock, allowing "experienced enthusiasts... [to take] it beyond the specification limits."

Computer Shopper has already managed to test the Intel Core 2 Extreme QX6850 (see *What's New*, page 51). Our benchmark tests show that it is significantly faster than previous single-, dual- and quad-core chips. Multi-core processors benefit most with multi-threaded applications, which means that some video-editing applications will be able to process files much faster. In our video-editing test the QX6850 scored 491, which is twice as fast as a mid-range Core 2 Duo processor.



Intel timeline Twenty years of PC processors

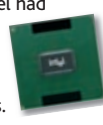
Intel launches the i860, which was the first processor containing more than one million transistors. The 386 and 486 processors followed shortly afterwards.



Intel's line-up includes Overdrive processors for easy upgrades and the ground-breaking Pentium processors. Some early Pentiums had a bug known as the Pentium FDIV bug.



Pentium MMX processors appeared in 1997 and Celeron and Pentium III, arrived soon after. By 2000 Intel had produced the Pentium 4. It contained 42 million transistors.



HyperThreading is introduced, the first 0.13 micron processors appear in 2002, and laptops include Centrino technology, adding wireless networking as standard.



Multiple-core processors will be standard in all PCs and Macs and the Centrino system has been upgraded to include support for WiMAX for long-distance wireless networking.



1989

1995

2000

2005

2009



Broadband rip-off

Internet companies fail to deliver promised speeds

If the internet seems slow today, maybe your ISP is ripping you off. Only one in five broadband users are getting the speeds they pay for, according to Moneysupermarket. And if you live in a rural area you are more likely to have speed problems, meaning that you are essentially subsidising townies.

Price comparison site Moneysupermarket.com has found that only 21 per cent of UK subscribers get the top speed advertised by their ISP, with 44 per cent getting half the speed. This problem is usually associated with ADSL connections, which is the most common type of broadband connection in the UK.

The company claims that only six per cent of subscribers to Sky's "up to 16Mbit/s" package get near this speed, with 78 per cent only achieving speeds of up to 8Mbit/s. Over half of Talk Talk, Orange and BT customers signed up to an "up to 8Mbit/s" deal get maximum speeds of only 4Mbit/s.

Consequently, many broadband subscribers feel they have been misled. "I urge all people to check what deal they are on and then ask their broadband provider for a free upgrade, so they may actually get a noticeable increase in their speed," said Jason Lloyd, Moneysupermarket.com's head of broadband.

"Providers are aware in many cases they don't deliver the speed they promise and so will be keen to

appease unhappy customers wherever they can." Lloyd claims that a simple solution to unsatisfactory speeds is to ask for more than you need. "With 44 per cent of people barely getting half the speed they signed for, it may be worth opting for a package twice as fast as you want to reach your desired speed," he says, though he acknowledges that for most of the country this is probably not an option.

Moneysupermarket.com says that the blame doesn't lie solely with ISPs. "Line interference, the quality of wiring into and around your home, its distance from the telephone exchange and the number of people sharing the same provider connection in your area at the same time affect broadband speed," says Lloyd. However, he did add that providers do not emphasise these factors, preferring instead to put them in the contract small print.

Moneysupermarket commissioned broadband data specialist Sam Crawford to create a Broadband Speed Map of Britain, which confirms that urban areas provide both the fastest connections and best deals. "This is because of the reach of local loop unbundling (LLU) and the penetration of the cable companies," Crawford says. "If you live in a more remote part of the country, the reality is you will often be paying the same price as your urban counterpart but receiving a slower speed."

BT explains poor broadband speeds

BT claims that some users of its BT Broadband service have been experiencing slow speeds because of the increasing popularity of fast internet connections. The telecoms company said in a statement that the problems were down to congestion in some exchanges, which has been caused by rising demand.

"Broadband usage in the UK has been one of the great consumer success stories and we are aware that this accelerating demand has meant that a few exchanges can be congested at very busy times," the statement reads. "The broadband team at BT Retail is working with our BT Wholesale colleagues to resolve this issue as soon as possible."

It goes on to explain that BT Retail is currently introducing extra bandwidth availability and working to improve the way broadband traffic is managed at peak times.

"Both of these initiatives will improve your experience and if you are among the small number of broadband users that have been experiencing slower speeds through congestion, you should be noticing improvements shortly, if you're not doing so already," it says.

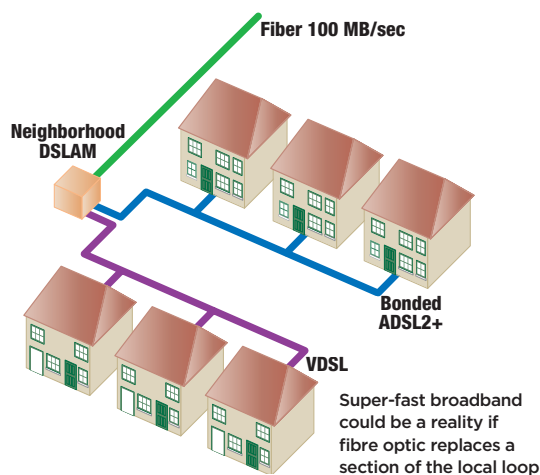
Non-profit consumer group ISP Review said that BT's statement was a "surprise" as, while it had seen "one or two remarks", complaints were not above normal levels. But Think Broadband, the UK's largest independent broadband review site, pointed to users on its BT Broadband forum, who had been concerned about slow speeds.

Broadband: the future?

A new broadband standard is emerging that works in a similar way to ADSL but provides much faster connections. In the UK the fastest broadband services are ADSL2+ or cable internet connections. ADSL2+ can handle a maximum download speed of 24Mbit/s and upload speeds of up to 1Mbit/s, while Virgin Media's cable internet service is theoretically capable of 20Mbit/s. However, UK homes could have speeds of up to 100Mbit/s if telecoms companies upgrade their cabling.

Very High Speed Digital Subscriber Line (VDSL2) services work over existing cabling, but only over a distance of around 1km. This means that houses close to a telephone exchange could sign up to ultra-fast internet connections, although for the majority this kind of speed remains a hopeless dream.

However, there is a way to transport your home nearer to the telephone exchange virtually. As telecoms companies start to replace old wiring with fibre optic cables, so the length of the copper cable between your house and the digital optic connection shortens.



IN BRIEF

FREE PC WITH ORANGE BROADBAND

Sign up for an Orange broadband package and PC World will throw in a free notebook PC worth over £300. Customers who subscribe to a two-year deal at a PC World store can claim an Advent notebook. There is also an option to upgrade to a more powerful computer. The 2Mbit/s broadband offer costs £14.99 per month.

SWEDISH SILVER SURFER GETS WORLD'S FASTEST BROADBAND

A 75-year-old Swedish woman has the world's fastest internet connection, at a torrent-busting 40Gbit/s. Sigbritt Löthberg of Karstad has never had an internet connection before, but she just happens to be the mother of Peter, an internationally renowned expert in optical networks who works for Cisco. He arranged the hook-up through the local council's network.

MICROSOFT UNVEILS ONECARE 2.0 BETA

Microsoft has made available for download a beta version of its latest Windows Live OneCare 2.0 desktop security product. The software giant is claiming a number of improvements to the security software, in the hope of closing the gap on rival security suites. The first version of OneCare performed poorly in Shopper's anti-virus tests.

INTEL SUPPORTS ONE LAPTOP PER CHILD

Intel says it will now support a non-profit foundation's project to put computers in the hands of poor children around the world, reversing its long-standing opposition to the proposal.

The world's biggest chipmaker will join the board of the One Laptop Per Child Foundation, which developed the AMD-based XO notebook PC, which it plans to put into production in September.



IN BRIEF

ANTI-MICROSOFT OFFICE CAMPAIGN GATHERS PACE

More than 20,000 people have put their names to a web petition opposing Microsoft's attempts to have its new Office file format accepted as an international standard.

The NoOOXML.org petition calls on members of the International Organization for Standardization (ISO) to vote against accepting Open XML, which it says Microsoft is trying to fast-track through the approval process.

GOOGLE TO CUT COOKIE LIFESPAN

Google has begun implementing a new cookie policy as part of its review of its privacy practices. Over the next few months it will start issuing cookies that are set to auto-expire after two years of inactivity. During this two-year period, active users will have their cookie renewed so that preferences are not lost.

WINDOWS MEDIA DRM CRACKED AGAIN

Hackers have broken Microsoft's Windows Media DRM technology – again. A new version of the FairUse4WM program provides a simple drag-and-drop interface for converting restricted music files into the open MP3 format. That includes files purchased from online music stores that rely on Windows DRM, notably Napster.

BLETCHLEY PARK TO HOUSE NATIONAL COMPUTING MUSEUM

Bletchley Park is to be the home of a new National Museum of Computing. The museum will be situated in the famous estate's Block H, built in 1944 to house the world's first digital computers. The museum will follow the development of computing from the top-secret pioneering efforts of the Colossus, through the mainframes of the 1960s and 1970s and the rise of personal computing in the 1980s.



Magnetic ink arrives

Colour-changing ink paves the way for low-cost digital paper

Scientists have found a way to use electromagnetism to change the colour of liquids, potentially paving the way for improved computer displays and erasable electronic paper and ink. A group of nanotechnologists from the University of California have succeeded in using an external magnetic field to change the colour of tiny particles of iron oxide suspended in water. Changing the strength of the magnetic field altered the apparent colour of the water.

Because iron oxide does not hold a magnetic charge, the particles don't have a 'memory' and lose their magnetic (and, thus, colourful) property when the magnetic field is removed.

The colour change is brought about because the magnetic field causes the particles to change their physical arrangement. This in turn alters the way in

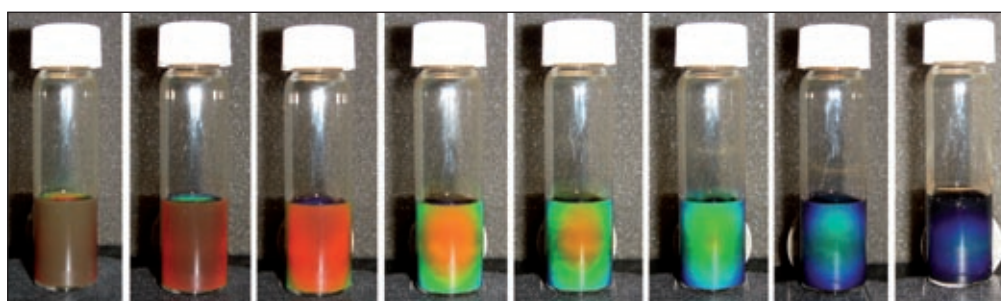
which light either passes through or is deflected. The results are clear colours that span the full visible range.

"By reflecting light, these crystals – also called photonic crystals – show brilliant colours," said Yadong Yin, an assistant professor of chemistry who led the research.

Altering the strength of the magnetic field allowed the scientists to tune the spacing between the nanoparticles. Doing so changes the displayed colour. "Other reported photonic crystals can only reflect light of a fixed wavelength," Yin said. "Our crystals, on the other hand, show a rapid, wide and fully reversible optical response to the external magnetic field."

Iron oxide is cheap, plentiful and non-toxic, making it an attractive material for manufacturers to use.

You can see a video of a phial of liquid changing colour at <http://tinyurl.com/37rcx9>.



▲ Moving magnets change the colour of tiny particles of iron oxide suspended in liquid

Obesity link to sore wrists

Carpal tunnel syndrome, the bane of many computer users, has been linked to obesity, another bane of many computer users. According to a report delivered to the European Neurological Society Meeting in Rhodes, Greece, obesity and the shape of the wrist correlate with an increased rate of the painful condition.

Carpal tunnel syndrome (CTS), which is often associated with repetitive strain injury (RSI), involves the swelling of tissues inside the wrist. Tendons and their protective sheaths are particularly prone to this problem. The result is a painful injury that includes fatigue, pain, weakened grip and a combination of numbness, burning and cold sensations.

A study by the Gaziosmanpasa University in Turkey has found that while obesity is linked to CTS, it is not the cause. The bad news for overweight computer operators is that shedding pounds is not likely to help relieve CTS symptoms. Obese CTS sufferers were monitored as they lost weight, but "the weight loss brought no relief in carpal tunnel syndrome," according to Dr Yuksel Kaplan, who ran the study.

Dr Kaplan speculated that the relationship between obesity and CTS could indicate a genetic link between the two, or that patients might share a genetic profile that predisposes them to both conditions.

Texting to bomb

If you thought your smartphone was clever because it comes with a built-in GPS, think again. Boeing has demonstrated the use of semi-autonomous spy planes capable of tracking targets and directing attacks from armed planes – all controlled by a mobile phone.

The company outlined a scenario where sending a text message from a mobile could instruct an Airborne Warning and Control System (AWACS), outlining a target and mission. The AWACS battle management software then calculates routes for unmanned ScanEagle reconnaissance aircraft currently in the air. It sends out new orders to reroute these planes, which then send back video footage of the target.

This kind of mission can be made fully automatic, but a manual stage has been introduced to prevent fatal errors. After manually checking that the target is correct, the AWACS orders simulated F/A-18 tactical aircraft to destroy the target with air-to-ground missiles. Video footage is also sent back to the original mobile phone that instigated the operation. "[This system] demonstrates a mixed manned and unmanned battle environment, IP addressability and that the standard NATO message can be used to talk to the ScanEagle," said Marshall Williams, programme manager for mission management research at Boeing Advanced Systems.



Spy planes controlled by mobile phone are capable of directing attacks



Vista security is “best ever”

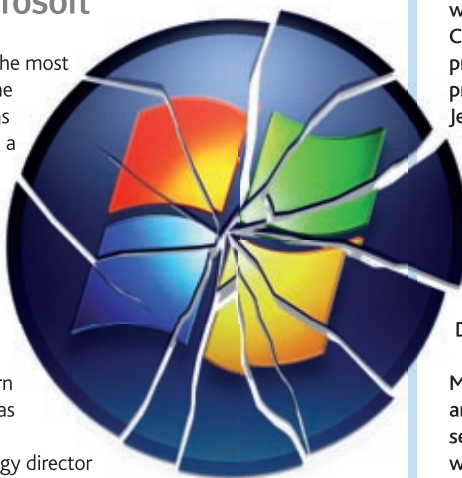
Outstanding security record but holes remain, says Microsoft

Microsoft's Windows Vista is the most secure operating system on the market, beating earlier versions of Windows, Apple's OS X and a selection of Linux distributions, according to a report by a Microsoft researcher. It claims that Vista's security track record shows that it has fewer known security holes than the competition. However, users may be disturbed to learn that not every security hole has been plugged.

Jeff Jones, a security strategy director in Microsoft's Trustworthy Computing group, analysed the number of security holes found over a six-month period, from when Windows Vista was launched at the end of November 2006 until the end of May 2007.

He found that, although there had been an overall increase in the number of security problems being reported, Microsoft has provided just 12 vulnerability fixes for Windows Vista, compared to 36 problems that were fixed with Windows XP within the first six months of its release. Jones noted that there are many more security researchers disclosing security vulnerabilities now than there were in 2001, when Windows XP was released.

Because there are now “more researchers, better trained, and with better tools and techniques than ever before... better able to find and disclose security vulnerabilities,” Jones implied that Vista has been scrutinised more closely than Windows XP was. Windows Vista's lower



“Vista had only one ‘High’ severity issue outstanding”

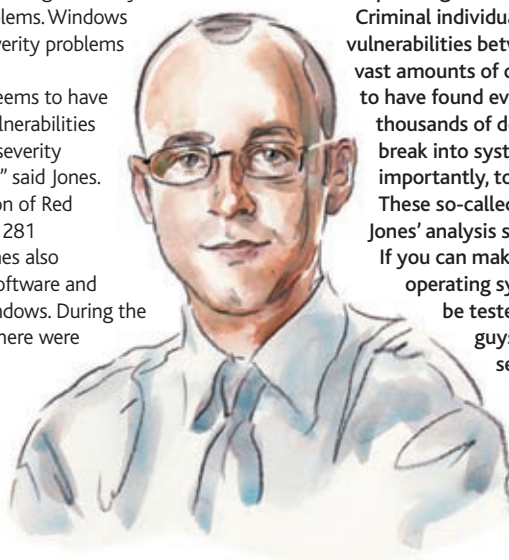
number of disclosed problems indicates that it is more resilient to the probing of hackers.

Not every discovered security hole is fixed straight away, however, and at the end of the first six months, Windows Vista systems were still vulnerable to 15 problems, one of which was rated as a ‘High’ severity problem, with an additional four ‘Medium’-rated problems. Windows XP, on the other hand, had two outstanding ‘High’ severity problems and one ‘Low’-rated one.

“With respect to its predecessor, Windows Vista seems to have a better initial six months, with one-third as many vulnerabilities fixed and with Windows Vista having only one ‘High’ severity issue outstanding at the end of the six-month period,” said Jones.

Linux comes in for a bashing, with a full installation of Red Hat Enterprise Linux 4 Workstation reportedly having 281 vulnerabilities, 86 of which were of ‘High’ severity. Jones also analysed a cut-down installation, lacking the server software and other types of application that do not come with Windows. During the first six months of this Linux version being available there were 214 vulnerabilities, 62 of which were High severity.

Apple fixed 60 vulnerabilities in OS X 10.4, 18 of which were rated as ‘High’. At the end of the six-month period, there were 16 publicly known outstanding security issues that had not been fixed, three of which had a ‘High’ severity rating. This puts the Mac in a more secure position than Linux but worse off than Windows Vista.



NEWS ANALYSIS

Judging a program's security strength

Judging a program's security strength is a complicated business, but one way is to count the number of times someone finds a security hole. Compare this figure to the number of fixes that the software company provides (and how quickly) and you'll get an idea about how hacker-proof your software is. This is the approach that Microsoft researcher Jeff Jones took (see left), and it gives the strong impression that Windows Vista is significantly more secure than Windows XP, Mac OS X and even Linux. However, this approach is simplistic and does not give the whole picture.

It's not hard to believe that Windows Vista should be more resilient to probing by security professionals than Windows XP. After all, Microsoft has spent a lot of time rewriting Windows so that it is more secure. Or, at least, it's spent a lot of time telling us that it has. Despite this, some of Jones' results are surprising.

We've always been told, albeit by Apple and its loyal customers, that Macs are more secure than PCs. Yet it seems that OS X is as fallible as any other operating system. In fact this situation, where Macs are now seen to be significantly more vulnerable to attack, was quite predictable when Apple moved from its proprietary OS 9 operating system to a system based on UNIX. UNIX is, in theory, no less secure than OS 9. It's just that it's more popular, which means it's worth researchers and hackers investigating it.

Some Linux evangelists will argue that the high number of discovered and fixed problems in Linux and parts of OS X is symptomatic of open-source software (OSS). It is easier for experts to scan OSS for problems because they have complete access to the source code. The more problems they find and the more fixes that are applied, the more secure the software becomes.

You could use this argument to claim that the low number of discovered Windows Vista vulnerabilities means that there are loads still to be found. You could speculate that some may have already been found, but that Microsoft is either working on a fix right now, doesn't want to fix it or doesn't know about the problem. In fact, the idea that Microsoft doesn't know about all the discovered security holes in its products is not speculation at all. ‘Unknown’ Vista vulnerabilities and the means to exploit them exist.

Generally speaking, there are two types of people who are interested in finding security holes in software. Security researchers look for holes in order to highlight potential problems with a program or operating system's security. These are considered by most to be the good guys, particularly when they inform a company about the problem and keep quiet about it until a fix is produced. Criminals, on the other hand, want to find new holes so they can gain access computer systems to which they have no legitimate access. They don't often drop an email to Microsoft pointing out new ways to break into Windows Vista.

Criminal individuals or groups are known to trade details of vulnerabilities between themselves, though, sometimes for vast amounts of cash. Security company Trend Micro claims to have found evidence of criminals selling exploits for thousands of dollars. These exploits, which can be used to break into systems, are not known to the public or, more importantly, to the companies that write the software. These so-called zero day exploits do not show up on Jeff Jones' analysis simply because of their secret nature.

If you can make one prediction about the security of an operating system, it is that the most popular one will be tested the hardest by both the good and bad guys. There is more kudos to be earned by a security researcher who finds a Vista vulnerability than an XP one today, and more money to be earned by a hacker who sells a zero day Vista exploit.

Simon Edwards

Web developer and security expert

IN BRIEF

VIRUS-WRITERS EXPLOIT POTTER MANIA

Virus writers are taking advantage of interest in the summer's biggest movie and book releases by targeting unsuspecting fans with a wave of malware. While supermarkets were preparing for the launch of the latest Harry Potter book, viruses promising leaked copies of the book and plot details continued to spread.

TIME'S UP FOR DIAL-UP

Dial-up is on its last click, hiss and whistle. An estimated 1.4 million UK homes abandoned their 56K connections in the past six months, leaving just 2.2 million narrowband users nationwide. According to a survey by Point Topic, a third of those plan to ditch dial-up in the next six months.

GOOGLE LETS USERS BUILD OWN MAPS

Google has introduced a new feature that lets users create personalised maps that plot the location of everything from cheap petrol to the latest earthquakes worldwide. The new feature allows consumers to select from more than 100 mini-applications created by independent software developers. These allow users to overlay data on top of Google's popular online map service.

DATA COMMISSIONER ON THE WARP

The UK's Information Commissioner has told UK business to get its act together over data security. Richard Thomas, the head of the authority charged with protecting personal data, says the number of security breaches that result in sensitive data being leaked is unacceptable. "Over the last year, we have seen far too many careless and inexcusable breaches of people's personal information," he said.

HMV TO OFFER MP3 FILES WITHOUT DRM

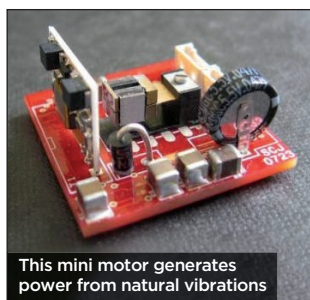
HMV has announced it will provide DRM-free music downloads. The move follows Apple's decision to offer DRM-free music on its iTunes site. However, HMV's music files will have a high-quality bit-rate of 328Kbit/s, as opposed to the 256Kbit/s files on iTunes. Prices will start at 79p per track.

Spy robots in PC World

PC World is to start selling spy robots. If your idea of a perfect Christmas present is a remote-controlled camera and microphone combination that is able to record video and sound and transmit it wirelessly back to a PC, then the £200 Mechano Spyke robot could be just the thing you're looking for.

Controlled by a PC using a wireless connection, the unit can patrol your home and broadcast its reports back to you. You can also send messages from a PC to the robot, which means that you can harass your family from your desk at work. Spyke, so called because it includes a Skype-compatible VoIP phone, also features a built-in MP3 player, so you could use it to lull a child to sleep with a nursery rhyme, and use the motion detector to notify you with an emailed message should the child move.

A spokesman for PC World claimed that this device, and other more expensive ones that will also become available, are useful rather than simply toys. "In the past it was just child's play – dinosaurs that walked and the like – but these things have real utility and are the shape of things to come."



This mini motor generates power from natural vibrations

Powerful vibrations

Scientists have developed a miniature generator that converts vibrations into electrical energy. The University of Southampton created the one-cubic-centimetre device initially with a view to providing power to equipment in situations where replacing batteries is difficult, such as remote wireless sensors and medical implants such as pacemakers.

The generator harnesses natural vibrations to tremble magnets on a cantilever. This generates enough power to run sensors in manufacturing plants, which is expected to be the first application of the device.

CRAZE What the web is really for

with Tom Royal

IM IN YR SHOPPER

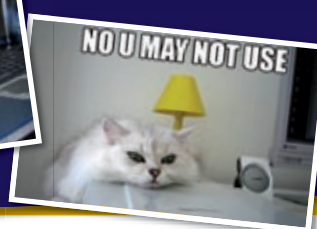
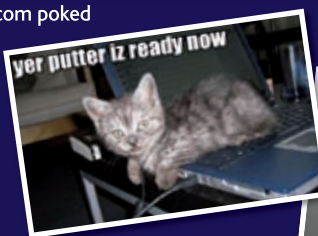
Over the past few months it's become increasingly hard to surf the web without running into a photo of a cat overlaid with a short, misspelled caption. Known as lolcats – cats that make you laugh out loud – these images have gone from being a niche pursuit of kids and bored workers into a subject of study for linguists and a tool for political satire.

Images of animals overlaid with absurd captions have been floating around the internet for years. Since the appearance of a grey cat captioned with "I can has cheezburger?", though, cats have become the subject of choice. If you have a few hours to waste you can find a massive archive at the website www.icanhascheezburger.com.

Anyone with a copy of Microsoft Paint and 10 minutes to spare can get in on the act. Unfortunately, many did. Lolgeeks.com poked fun at the bespectacled and brainy, a lol80s chat forum thread mocked hairstyles of generations past and lolpresident.com did the same to George Bushes senior and junior. Meanwhile, LolHamas and LolDeadCats battled for the moral low ground.

With email servers everywhere groaning under the weight of kittens labelled with deliberately misspelled captions, even academics began to sit up and take notice. Linguists noted that the grammatically mangled text of lolcat captions had a fairly consistent set of rules (I has idiosyncratic conjugation) and might even comprise a pidgin language. Whether this allows cats to communicate with humans or merely facilitates communication between idiots is up for debate.

Others suggested that lolcat captions are the latest in a line of snowclones, or short expressions that are adopted into common usage because they're easy to customise. Computer programmers contributed to the lolcat language debate in a different way, creating a programming language called lolcode that uses common lolcat terms.





Manhunt 2 banned in UK

Censor sees red over “unremittingly callous” game

The British Board of Film Classification (BBFC) has banned Manhunt 2, a controversial computer game that features extreme violence. The move has caused Take Two, the game's publishing company, to cancel its scheduled launch in the UK. Manhunt 2 was given an Adults Only rating in the USA and is the first game to be banned by the Irish Film Censor's Office.

The main character in the game is a mentally deranged man who escapes from an institution and hunts down those he believes are his enemies. The original (also controversial) Manhunt game used weapons and strategies including creeping up behind an opponent to suffocate him with a plastic bag.

The BBFC claimed the game exhibited “unremitting bleakness and callousness of tone [with an] unrelenting focus on stalking and brutal slaying.” Take Two said that the title is a work of art and that it supports it fully.

Rockstar, the games company that created the game, is not unused to courting controversy. Its previous major release was called Bully (Canis Canem Edit in the UK), which involved surviving life in a private school. Critics claimed that the game encouraged bullying, although the game's aim was to defeat bullies rather than join them. Rockstar's series of popular but violent Grand Theft Auto games have also attracted criticism for their violent content.



Manhunt 2: Callous and bleak or a work of art?

The violent game debate

Violence in computer games has been both popular and reviled for years. While some believe that enacting violent fantasies through the medium of computer graphics is harmless fun, others believe that playing violent games causes damaging behaviour.

“Mental masturbation”

Jack Thompson, Florida attorney, on computer games in general, violent or otherwise

“Absent the combination of extremely violent video games and these boys’ incredibly deep involvement, use of and addiction to these games and the boys’ basic personalities,

these murders and this massacre would not have occurred.”

From the lawsuit filed by victims’ relatives against a number of games companies, including Doom publisher id Software. The lawsuit, which followed the Columbine massacre, was thrown out

“[It] has so many demeaning messages about women and so encourages violent imagination and activities and it scares parents... They’re playing a game that encourages them to have sex with prostitutes and then murder them. You know, that’s kind of hard to digest.”

Hillary Clinton, New York’s junior senator, on Grand Theft Auto

“Police investigations did not uncover any connections to the computer game.”

Lancaster constabulary spokesperson on Manhunt, following the murder of teenager Stefan Pakeerah

“In the years since video game sales have really exploded, not only have youth violence rates decreased but violence rates in the US have declined precipitously.”

Sociologist Dr Karen Sternheimer, on computer games in general, violent or otherwise

The Doom series of games continues to draw criticism



IN BRIEF

IBOLT FRACTURES JAW AND BURSTS EARDRUMS

A man listening to his iPod in a storm got a nasty shock when lightning struck. The bolt was conducted through his headphones, bursting his eardrums and fracturing his jaw.

The 37-year-old from Vancouver, Canada, also received second-degree burns on his chest and left leg, and two linear burns that extended along his chest and neck to the sides of his face, ending at the points where his earphones sat in his ears. His jaw muscles contracted violently, dislocating and breaking his jaw.

APPLE ‘PLANS NANO IPHONE’

Apple plans to launch a cheaper version of the iPhone before Christmas, which could be based on the ultra-slim iPod Nano music player, according to a JP Morgan analyst. He bases his prediction on contacts in the supply chain and a US patent application.

PCs AND GADGETS SWALLOW ELECTRICITY

PCs, flat-screen televisions and other hi-tech gadgets will consume nearly half of a typical household’s electricity usage by 2020, an energy conservation body claims. The Energy Saving Trust says gadgets will overtake kitchen appliances and lighting as the biggest use of domestic power. New devices are often more power-hungry than earlier models and many don’t even have an ‘off’ button.

MAN WINS MOBILE RECYCLING BATTLE WITH TESCO

A Welsh man is set to enjoy a “holiday of a lifetime” after winning a battle with Tesco over its mobile phone recycling scheme. Rob Sharpe, of Abergele, collected 133 handsets by setting himself up as the unofficial collection point for the area’s unwanted mobiles.

Sharpe was looking to reap 500 loyalty card points for each working phone and 100 for each broken handset, thereby accumulating 40,000 points to exchange for holiday vouchers. Tesco imposed an arbitrary limit, which it later withdrew after the BBC Wales consumer programme X-Ray intervened.